CLAIMS

What is claimed is:

1. A printing system comprising

a) a host device for executing programs;

b) an office machine having a print engine for receiving print engine ready data and based thereon for rendering images and a PC card slot for receiving PC cards; and

c) a PC card for removably coupling with the PC card slot of the office machine and for coupling with the host device, the PC card having a formatter integrated circuit for providing formatter functions, the formatter integrated circuit for receiving printer formatter ready data from the host device and based thereon for generating print engine ready data.

2. The printing system of claim 1 further comprising:

d) printer formatter firmware that when executed by the printer formatter causes the printer formatter to perform formatter functions;

e) printing software having an automatic update module that when executing on the host device automatically downloads to the host device from a source one of an updated version of printer formatter firmware and the printing software.

3. The printing system of claim 2 wherein the source is one of a web server and a computer readable medium.

4. The printing system of claim 2 wherein the automatic update module when executing on the host device automatically downloads to the printer formatter an updated version of printer formatter firmware.

5. An office machine comprising:

a) a rendering engine for rendering images; and

b) PC card slot coupled to the rendering engine for receiving a removable PC card;

wherein the PC card slot is utilized to transfer formatter output from the removable PC card to the rendering engine.

6. The office machine of claim 5 further comprising:

c) a print engine ready data interface for coupling to a PC card and selectively receiving print engine ready data therefrom.

7. The office machine of claim 5 wherein the office machine is one of a laser printer, inkjet printer, and an all-in-one office machine.

8. A removable PC card for removably coupling with corresponding card slot in an office machine comprising:

a) a formatter integrated circuit for providing formatter functions; and

b) a connector having a print engine ready data interface for coupling to the office machine and selectively receiving print engine ready data therefrom;

wherein the PC card is adapted for insertion into a corresponding PC card slot in the printer and wherein the formatter integrated circuit may provide formatter functions to the printer when coupled thereto.

9. The removable PC card of claim 8 further comprising:

c) a connector having a printer formatter ready data interface for coupling to a host machine and selectively receiving printer formatter ready data therefrom.

10. A method of printing in a system that includes an office machine having a print engine and a slot for receiving a PC card, a PC card for removably coupling to the office machine, the PC card having a printer formatter printer and a memory for storing a printer formatter program, a host having a printing software, the method comprising the steps of:

a) determining whether the PC card has been operationally coupled to the slot of the office machine;

b) when it is determined that the PC card has been operationally coupled to the office machine, then determining whether the printer formatter program is loaded in the memory of the printer formatter; otherwise proceeding to step (a);

c) when it is determined that the printer formatter program is loaded in the memory, then determining whether the printer controller program is valid; otherwise, loading the printer formatter program into the memory and repeating step (c);

d) when it is determined that the printer formatter program is valid, then determining whether the printer formatter program is compatible with the print engine, the printing software and printer formatter;

e) when it is determined that the printer formatter program is loaded, valid, and compatible with the print engine, the printing software and printer formatter, then sending data to be printed to the printer formatter.

11.   The method of claim 10 further comprising:

d1) when the printer controller program is one of not loaded, invalid, and incompatible, then notifying a user of the incompatibility.

12.   The method of claim 10 further comprising:

d1) when the printer controller program is one of not loaded, invalid, and incompatible, then downloading the printer controller program to the memory.

13.   The method of claim 12 wherein the step of downloading the printer controller program to the printer controller further comprises:

downloading the printer controller program from the host to the memory.

14.   The method of claim 12 wherein the step of downloading the printer controller program to the printer controller further comprises:

downloading the printer controller program from a web site to the memory.

15.   The method of claim 10 wherein the step of determining whether the printer controller program is valid further comprises:

performing a cyclic redundancy check on the printer controller program.